

These facts, however, do not affect the general question. It is quite evident that a systematic arrangement of the marsupia does not coincide with a natural system of the family. The species of *Diplodon* of New Zealand, which I have examined, had filled only the inner gills with eggs; but Suter has observed that sometimes eggs are also found in the outer gills. Simpson says that in the species of *Quadrula*, both the gills are filled with eggs, but that sometimes the inner gill contains but few. We cannot doubt that in the most ancient *Unionidæ* the eggs were discharged only into the inner gills and that later all four gills were filled with eggs, representing the last stage, the exclusive employment of the outer gills. In the genus *Quadrula* all these successive stages are still represented; and it is not admissible to use such differences for the establishment of genera. It happens that in the same species are observed great differences in this respect. The specimen of *Quadrula heros* Say, examined by Lea, had filled with eggs all the four gills; while the specimen examined by Sterki had only the hinder part of the outer gills filled with eggs, as in many species of *Lampsilis*. According to the classification of Simpson, which in this respect is an artificial one, these specimens would fall in quite different genera. Differences of this nature have caused Simpson to separate from *Quadrula* various species and sub-genera. It is no natural disposition when we see *Pleurobema* allied with *Unio*, *Quadrula tuberculata* Bar. widely separated from the nearly related species *speciosa*, *forshyeji*, etc.; *Obliquaria reflexa* widely remote from *Quadrula metanевра*; *Quadrula æsopus* allied to *Pleurobema*. In the same manner is *Lampsilis phaseolus* separated from *L. iris*, etc., because the development of the marsupium is more extensive. Therefore it is necessary to associate these separated groups with their real relatives.

(To be concluded.)

A NEW COLOMBIAN CLAUSILIA.

BY HENRY A. PILSBRY.

Nenia Smithiæ, n. sp. Pl. II, figs. 10, 11, 12.

Shell cylindric-fusiform, rather thin, lusterless, nearly smooth, obsoletely marked with growth-wrinkles; of a rich purplish-brown color. Whorls $8\frac{1}{2}$, moderately convex, the penultimate widest, those

above gradually tapering to an obtuse apex; last whorl flattening at the sides, elongated, having a weak basal carina, the suture very obliquely descending, becoming shortly free in front. Aperture large, rotund-ovate, dark reddish-brown inside; peristome broadly flaring, white on both face and reverse. Superior lamella vertical, compressed and sharp, continuous with the spiral lamella. Spiral lamella short, penetrating merely to a dorsal position. Inferior lamella rather receding, not extended upon the peristome, strongly converging toward the superior lamella, ascending straightly inside, and penetrating to a ventral position. Subcolumellar lamella completely immersed, short. Principal plica situated high, short, extending from a latero-dorsal position nearly to the lip. Lunella united with the lower end of a short, curved upper palatal plica, together with it forming somewhat the shape of an inverted letter J. No lower palatal plica.

Length 24, diam. 4.2, longest axis of aperture 5.5 mm.

Sierra de Sta. Marta, U. S. of Colombia, at El Libana, at 6000 to 7000 ft. elevation, in moss on tree trunks. Collected by Mr. H. H. Smith, May, 1898.

This species belongs to a somewhat numerous group of plain species from Colombia and Ecuador. It resembles *N. femurina* Jous., of Ecuador, but has different sculpture and a longer "neck." In *N. crossei* Hid., the aperture is narrower and oblong, not rounded-ovate as in this species.

It is named in honor of Amelia W. Smith, the devoted and capable companion of her naturalist husband, on his collecting journeys through the tropics of two continents. Types in Coll. A. N. S. Phila. and of George H. Clapp.

A GIGANTIC FOSSIL LUCINA.

BY WM. H. DALL.

During the cruises of the U. S. Fish Commission steamer *Albatross* in the West Indies, some years ago, one of the party collected some fossils from various localities, and among others some large internal casts of bivalves from Clairemont, St. Ann's Parish, Jamaica. These, according to the investigations of Hill, must have come from the Montpelier white limestone, a widespread deposit of Upper Eocene or Oligocene age, but older than the Oligocene of the